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XII.—*A Systematic Revision of the African Species of the Coleopterous Family Erotylidæ.* By GILBERT J. ARROW.

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HAVING been asked by Professor Thaxter, of Harvard, to determine for him several species of African Erotylidæ upon which he has discovered parasitic growths of Laboulbeniaceæ, two of the hosts being here described as new species, it has become necessary to look closely into the comparative characters of the recognized genera. This has revealed a state of confusion in the nomenclature which, so long as it remains, renders the description of additional species a positive disservice to systematic entomology, as increasing the difficulties of those who come after. In naming these new forms I have therefore felt myself under the obligation of attempting to bring into some better order the genera concerned. The recent work upon the group contributed by Kuhn to Wytsman's 'Genera Insectorum' fails in any way to dissipate the prevailing confusion. In his tables of genera sections are actually made to which no characters of any kind are assigned, the supposed geographical range of the genera being substituted. It is evident that the materials upon which the work is based were altogether inadequate for the purpose; but it is difficult to understand what value exists in compilations produced under such conditions.

Kuhn has catalogued seventy-four African species under fifteen generic names; but seven of the latter names prove

superfluous, and a critical examination shows that a considerable number of the specific names are synonyms. At the end of this paper I have given a revised list of the African species, distributed, so far as available materials permit (and I have fortunately been able to determine the large majority of described species), under their correct generic names. A number of hitherto unknown species are added. The genera will no doubt be increased as our knowledge of the species grows : but the latter are not numerous, so far as at present recorded, and the creation of new genera, in the present unsatisfactory state of classification of the family, appears very undesirable.

Either by oversight or intention the genus *Euxestus* has been omitted by Kuhn both from the 'Genera' and his since-published Catalogue, although allied genera like *Hypodacne* and *Eidoreus* are included. The African species of *Euxestus* here described forms an interesting link with *Hypodacne* and helps to render the position of the former genus less enigmatical. This is the second species known to me, all the non-African specimens I have seen, although bearing many names, being conspecific. *Euxestus parki*, Woll., was first discovered in Madeira ; but I have seen specimens from China, Burma, the Malay Peninsula, Philippine Is., Java, Hawaiian Is., Haiti, Central America, etc. *E. minor*, Sharp, and *E. piciceps*, Gorh., are certainly identical with it (see Champion, Trans. Ent. Soc. Lond. 1913, p. 79) ; and *Neoplotera peregrina*, Belon, and *Tritomidea translucida*, Motsch., I believe to be also synonymous both as genera and species. It is not possible to decide whether Motschulsky's names *basalis* and *oblonga* also belong to the same insect ; but the *Tritomidea rubripes* of Reitter, although related, is not congeneric, and the two Malayan species referred to *Tritomidea* by Gorham have evidently neither affinity nor resemblance to it.

M. Bedel has recently formed a new genus, *Mimodacne*, for certain species previously included in *Megalodacne* but in which the club of the antenna is very large and markedly asymmetrical. The genus is a little difficult to define, as the shape of the club is gradually developed through a series of transitions : but it may be convenient to retain it for those species which exhibit the most pronounced asymmetry. One of these, *M. magnifica*, Har., has been transferred to *Lindesmus* by Kuhn, in spite of the fact that Harold stated its resemblance to *L. cactus* to be purely superficial. It has also been redescribed by Kuhn as *Megalodacne kolbei*.

I have found myself, like Harold (Colcopt. Hefte, xvi.

1879, p. 219), unable to discover any feature of generic value by which it is possible to distinguish Crotch's genera *Megalodacne* and *Episcaphula*, and I therefore regard the latter, which is of later date, as a synonym of the former. All the African species retained in *Episcapha* in Kuhn's Catalogue have an elongate third joint to the antenna, and must therefore be referred to *Megalodacne*.

The sexes of many species of this genus are strongly differentiated by the curvature of the tibiæ and the dilatation of the tarsi in the male. *Episcaphula dubia*, Crotch, is the female of *E. aulacochiloides*, Crotch, the punctured prosternum noticed in the latter by Crotch being also a male character.

Episcapha schweitzeri, Dohrn, is synonymous with *Megalodacne obliquata*, Lacord.; *E. rectesignata*, Crotch, is a barely distinguishable form of it; and *E. neutra*, Dohrn, is evidently very closely related. *Megalodacne scenica*, Gerst., has also been redescribed as *Episcaphula picturata*, Gorh. The species described by Lacordaire as *Episcapha repanda* is probably not the true *M. repanda*, but the one later named *E. piciventris* by Gorham. *Episcaphula subcostata*, Schenk., appears to belong to the genus *Plagiopisthen*, which is best retained for the present as a separate genus, on account of its distinctive shape. *Platydacne* is a synonym of it.

The paper by Gorham describing Erotylidæ from South and West Africa (Ann. & Mag. Nat. Hist. (7) v. 1900) is so astonishing an example of confused nomenclature, and has resulted in complicating the synonymy of the genera concerned to such a degree, that the mind rather recoils from the Augean task of clearing the ground. Gorham's genera are usually exceedingly unsatisfactory, and his own conception of them is often geographical rather than morphological, as shown by such remarks as "Had this species been an African insect, I should have referred it to my genus *Amblyscelis*" (l. c. p. 90) and "I have taken an African insect for the type of *Amblyscelis*, otherwise I should have regarded this species and *A. nigrinus* as belonging to my genus *Petaloscelis*" (l. c. p. 89). It is evident from these passages that the genus *Amblyscelis* was a shadowy one, even in the mind of its author. Gorham has not, as a matter of fact, cited its type at all, but states that it is formed for the African species placed in *Amblyopus* by Lacordaire and Crotch. Of these he mentions only *A. senegalensis*, Lacord., which may therefore be considered the type of *Amblyscelis*. This species I do not know, but it possesses the very large and coarsely-faceted eyes and the narrow, loosely-jointed

antennal club characteristic of *Amblyopus*, whilst others associated with it by Gorham have small, finely faceted eyes and very short, broad, and closely articulated club-joints, as in *Petaloscelis*. It is true that they all agree in inhabiting Africa, but, in spite of that, their structural diversity precludes their association in a single genus.

The type of *Petaloscelis* is a Burmese insect, *P. instabilis*, Gorh. Kuhn has joined with it a very different species, *Erotylus rubens*, Hope, although I had already stated that to be a *Neotriplax*. With *P. instabilis* "*Amblyscelis*" *pallidus* and *hæmorrhous* of Gorham may be associated, and *A. kelleni* and *brunneus*, Gorh. (and perhaps *A. gorhami*, Gestro), are synonyms of the last. Another species is "*Zythonia*" *anthracina*, Gorh., incomprehensibly referred to a genus to which it has no resemblance. Equally mysterious is Gorham's simultaneous redescription of the true *Zythonia* (*Z. fulva*, Westw.), a striking and unmistakable insect, as *Lophocrotaphus guineensis*.

To the genus *Amblyopus* I refer "*Amblyscelis*" *ferrugineus* and *vittipennis*, Gorh., the latter name, as well as *Triplax dorsalis*, Kolbe, being synonymous with *Triplax marginata*, Qued. *A. nigripennis*, Arr., I am now satisfied is the same as *Amblyopus natalensis*, Crotch.

I do not know the species for which Gorham has made the genus *Pycnogeusteria*, but, as he has indicated no features of any generic significance by which it can be distinguished from *Petaloscelis*, I think it will be best to regard it as synonymous with that.

In 'Notes from the Leyden Museum,' 1888, p. 147, Gorham has changed the name *Cyrtotriplax* (*Tritoma*) *senegalensis*, Crotch, to *Amblyopus rotundatus* (omitted from Kuhn's Catalogue), but without reason, for Crotch's species agrees well with *Tritoma*. *Petaloscelis nigrinus*, Gorh., and several other African species are now added to this genus. They differ considerably in the form of the tibiæ and antennæ, but the transition is gradual from species to species, and I have found nothing to justify adding to the already too numerous genera.

Closely related to *Tritoma* is the peculiar genus *Palæolybas*, which has never been adequately described, although various species have been named by Crotch and Gorham. It has been quite unnaturally placed with South-American forms on account of its globose shape. In reality, it differs from *Tritoma* only in minor details, viz. the shape of the body, short legs, feeble antennæ, and broadly bilobed prosternum. An important feature hitherto overlooked is the marked

sexual dimorphism of some at least of the species. The males are characterised by greatly dilated tarsi; but, in several species, they have a more remarkable peculiarity in a conspicuous opaque area upon the posterior part of the elytra. Analogy would lead us to consider this distinctive of the females, as in Water-beetles, various Lamellicornia, and other groups in which a similar phenomenon occurs; but this is not the case. The dilated tarsi are not by themselves sufficient to determine the sex, for, although almost invariably indicative of the male, in certain genera of Languriinæ, a closely related group, it is the female in which the tarsi are most dilated. In these and other cases the determination of the sex from external indications only has led to totally wrong conclusions, and dissection is essential to absolute certainty.

As is frequently found with secondary sexual characters, the opaque dorsal area is not found in all the species of the genus. I have found it in three, in one only of which (*P. andrea*, Crotch) both sexes are known, but in all it is confined to male specimens. In *P. coccinelloides*, Crotch, *P. dorsalis*, Gorh., and *P. bizonatus*, sp. n., both sexes are equally smooth. Although it has not hitherto been recorded, this curious phenomenon is also found in the genus *Neotriplax*—in a strongly marked form in *N. atrata*, Lewis, and to a less extent in *N. lewisi*, Crotch, both Japanese species.

Dacne (*Engis*) *æquinotialis*, Thoms., is almost certainly the species later described by Crotch as *D. capensis*, which has an exceedingly wide range in Africa.

The only known African representatives of the *Encaustes* group are here described. Gorham described in 1883 a species, *Micrencaustes torquata*, the habitat of which he stated to be Old Calabar; but in 1901 he expressed himself doubtful of its African origin. In the British Museum there is a specimen of this species, derived, like Gorham's type, from Andrew Murray's collection, and labelled "Malay Peninsula."

The true systematic position of this group has never been recognized. The monographer of the Erotylidæ, Lacordaire, in his Synopsis of the genera, divided them into two series, at the head of each of which he placed an isolated genus as to the actual affinities of which he was evidently uncertain. The first of these, *Encaustes*, on account of its large size and elongate shape, is, not unnaturally, generally associated with the other large Old World species represented by those now called by M. Bedel *Mimodacne*; but Chapuis has pointed out that Lacordaire, in adopting this view, was

misled by an incorrect observation of the form of its maxillæ, and has removed it from the first series. He has not, however, transferred it to the second series, but has made for it a special group, of which the distinguishing features have little value. The projecting shoulders, which are chiefly relied upon, disappear in the species now called *Micrencaustes*.

The second series (Erotylini genuini) of Lacordaire (the Erotylites of Chapuis) consists entirely of Neotropical genera, with the addition of the single Old World genus *Aulacochilus*. A comparison between this genus and *Micrencaustes* will reveal the interesting fact that they are really very closely allied—and indeed identical—in all essential points of structure, differing only in the shorter and more ovate form, shorter antennæ, and less dilated tarsi of *Aulacochilus*. The peculiar form of the antennal club, the coarsely faceted eyes, strongly transverse last joint of the maxillary palpus, and the general conformation of the mouth are the same. Most important of all is a peculiar development of the genæ, which distinguishes this group of genera from all others. These are sharply elevated at the sides of the mouth, walling-in the latter in continuation of the mandibles, and forming a rest against which the delicate sensory surface of the last joint of the maxillary palpus is applied when in repose. This conformation I consider most essentially distinctive of the Encaustini, consisting of the four genera *Aulacochilus*, *Micrencaustes*, *Encaustes*, and *Asmonax*. As showing the closeness of the relationship between the first two of these, I may mention that the Philippine species described by M. Bedel as *Aulacochilus maximus* would, in my opinion, be better placed in *Micrencaustes*. It is nearly related to *M. 6-guttata*, Gorh.

For the purpose of the present revision, I have examined the African types of Crotch in the Cambridge Museum, but these do not include the species described by him from Andrew Murray's collection, the location of which is unknown to me.

The following Synopsis gives briefly the differential characters of all the genera of Erotylidæ which can, in my opinion, be admitted as African :—

Club of the antenna articulated.

4th joint of the tarsus reduced.

Last joint of the maxillary palpus longitudinal.

Antennæ very slender, with the club very

narrow *Linodesmus*.

Antennæ not very slender, with the club well-marked.	
Joints of the antennal club strongly oblique.	<i>Mimodacne.</i>
Joints of the antennal club not strongly oblique.	
Body strongly tapering behind, prothorax relatively broad	<i>Plagiopisthen.</i>
Body not strongly tapering behind, prothorax not very broad	<i>Megalodacne.</i>
Last joint of the maxillary palpus transverse.	
Genæ sharply elevated at the sides of the mouth.	
Body and antennæ long; tarsi more dilated.	
Prosternum not pointed in front	<i>Encaustes.</i>
Prosternum pointed in front	<i>Micrencaustes.</i>
Body and antennæ short; tarsi less dilated.	<i>Aulacochilus.</i>
Genæ flat.	
Head not dilated.	
Club of the antenna very broad and compact	<i>Petaloscelis.</i>
Club of the antenna not very broad and compact.	
Eyes very large and coarsely faceted ..	<i>Amblyopus.</i>
Eyes not very large and coarsely faceted.	
Prosternum not bilobed behind	<i>Tritoma.</i>
Prosternum bilobed behind	<i>Palæolybas.</i>
Head greatly dilated	<i>Zythonia.</i>
4th joint of the tarsus not reduced	<i>Dacne.</i>
Club of the antenna solid	<i>Euvestus.</i>

At the end of this paper I have given a revised synonymical list of the African species.

Megalodacne læta, sp. n.

Nigra, nitidissima, singulo elytro bis rufo-fasciato, fasciis valde undulatis, ad suturam haud attingentibus, prima post-humerali, secunda post-mediana, obliqua; elongato-ovalis, convexa, capite et pronoto sat fortiter et crebre, sed hujus medio lævius, punctatis, pronoti lateribus leviter arcuatis, distincte marginatis; elytris leviter punctato-striatis, subtilissime punctulatis:

♂, tibiis omnibus valde arcuatis, abdomine subtus medio dense flavo-pubescenti.

Long. 10-11 mm.; lat. max. 4.5-5 mm.

NYASALAND: Mlanje.

A series was taken by Mr. S. A. Neave in November and December.

It is a species of similar size, shape, and markings to *M. (Episcaphula) repanda*, Kl., and *piciventris*, Gorh., but is not red beneath and is much more smooth and shining

than the latter and rather broader. The anterior red band sends a branch almost to the basal margin of the elytron, and the posterior band is very wavy and oblique, not arched, as in *M. piciventris*, nor simply transverse, as in *M. repanda*. The third joint of the antenna is as long as the two following.

In addition to the strongly curved tibiæ, the male has a patch of thick pubescence on each ventral segment, the patches gradually increasing from the basal segment, where the hairs are few, to the terminal one, which is almost covered by them.

Megalodacne pubescens, sp. n.

Nigra, elytrorum macula basali angulata, ad basin et marginem externam producta, aliaque ante-apicali undulata ad margines haud attingenti, flavis; valde elongata, angusta, supra sat crebre et fortiter punctata, undique æqualiter minute pubescens, capite et pronoto fortiter punctatis, hoc lateraliter densius, marginibus antice arcuatis, postice fere rectis; scutello late transverso; clytris confuse haud fortiter punctatis, sine lineis distinctis; pedibus simplicibus; antennarum clava elongata, stipitis articulo tertio quam quartum parum longiori.

Long. 6.5 mm.; lat. max. 2.5 mm.

N.E. RHODESIA: Fort Jameson, 3800 ft. (*S. A. Neave*, June).

This little species is easily recognizable from its long and narrow form and the close pubescence with which it is entirely clothed. The two red elytral marks on each side are far apart and not broad, the basal one a little waved behind and having in front a straight branch which extends to the basal margin, the posterior one toothed in front and arched behind.

The legs are simple in both sexes, but the male has patches of longer hairs upon the ventral segments, increasing in extent from the base to the extremity.

Encaustes africana, sp. n.

Nigra, parum nitida, elytrorum annulo humerali, ad laterem paulo retrorsum producto, lunula obliqua post-mediana, a sutura remota aliaque subapicali uncinata, pallide flavis; elongata, angusta, clypeo fortiter punctato, fronte fere levi; pronoto paulo latiori quam longiori, irregulariter disperse punctato, lateribus bene marginatis, antice et postice fere rectis, angulis anticis paulo productis, posticis fere rectangulis;

scutello lato; elytris subtiliter seriato-punctatis; pedibus gracilibus.

Long. 21 mm.; lat. max. 8 mm.

UPPER CONGO: Kasongo to Stanley Falls.

A single specimen was found by Mr. A. F. R. Wollaston.

This, the first discovered African species of the genus, is unlike any other. It is very smooth above, but not shining, and the pale markings are of a bright yellow colour, quite different from the orange and red of the Oriental species. It is long and narrow, with slender legs, not very strongly dilated tarsi, and delicate but not long antennæ, with the club very small. The pale shoulder-patch is almost square in shape, with a round black spot in the centre; the post-median lunule is remote from it and curves forward parallel to, but at a distance from, the suture; and the apical mark is V-shaped, with its outer limb produced forward until it almost touches the postmedian one.

Micrencaustes spinipes, sp. n.

Flava, capite, pronoti medio, scutello, elytrorum marginibus, abdomine (medio excepto), pedibus antennisque rufis, pronoti maculis 5, elytrorum plagis duabus communibus, punctis 3 basalibus, una laterali ante medium posita unaque ante-apicali majori nigris; modice elongata, parum nitida, capite parce punctato, clypeo autem crebre et fortiter, pronoto minute et parce, basin versus fortius punctato; elytris leviter striato-punctatis; pedibus validis, tibiis omnibus apice extus acute spinosis; antennarum clava parva.

Long. 19 mm.; lat. max. 7.5 mm.

BELGIAN CONGO: Bakuba Country.

The single specimen in the British Museum was found by Mr. T. A. Joyce.

This also is like no other species yet known. The ground-colour is rust-red, with the sides of the pronotum and the elytra bright yellow edged with red, and the sternum, the middle of the abdomen, and rather complicated markings on the upper surface black. The black markings consist of an oblique inner dumb-bell shaped bar and outer spot on each side of the pronotum, and, upon the elytra, three small basal spots on each (the two outer ones elongate), a common transverse patch just behind the scutellum and another larger and broader one behind the former, a small lateral spot between the two large patches, and a larger spot near the apex of each elytron.

The insect is moderately elongate, smooth and shining,

with the clypeus closely and coarsely punctured, the forehead finely and sparsely, the eyes rather large and coarsely faceted, the pronotum finely punctured, coarsely near the base, without basal foveæ, the sides feebly curved, slightly convergent, the front angles slightly produced, the hind angles nearly right-angles, and the elytra rather feebly seriate-punctate. The legs are rather slender, all the tibiæ sharply spinose externally near the end. The club of the antenna is small, compact, and finely pubescent.

Petaloscelis fulvus, sp. n.

Omnino fulvus, nitidus, haud longe ovatus, sat convexus, capite et pronoto subtiliter punctatis, pronoto lateraliter modice crebre, lateribus parum arcuatis, angulis fere rectis, basi leviter lobato, scutello brevi, elytris distincte sed subtiliter punctato-striatis, intervallis subtilius punctulatis; pedibus brevibus, tibiæ extremitatibus latissimis; antennarum articulis tribus ultimis valde dilatatis, conjunctum vix longioribus quam latoribus.

Long. 4 mm.; lat. max. 2.25 mm.

S. RHODESIA: Salisbury (G. A. K. Marshall, Dec. 1897).

This is shorter, more ovate and convex than *P. hæmorrhous*, but a little more elongate than *P. nigrinus*, and is entirely tawny yellow in colour, with the legs and antennæ very short and stout and the upper surface finely and moderately closely punctured, but rather shining.

Petaloscelis hilaris, sp. n.

Omnino læte rufus, antennis (articulis tribus basalibus exceptis) nigris; ovatus, convexus, capite et pronoto ubique fortiter et crebre punctatis, oculis parvis, subtiliter granulatis, pronoto haud convexo, lateribus vix arcuatis, antrorsum fortiter convergentibus, angulis posticis acutis; elytris leviter striato-punctatis, intervallis subtiliter punctulatis; tibiis leviter dilatantibus; antennis sat crassis, articulis tribus ultimis late dilatatis.

Long. 7-8 mm.; lat. max. 4-4.5 mm.

GOLD COAST: Tamsoo, near Tarkwa (G. A. Higlett); S.E. CAMEROON; UGANDA: Chagwe, Mabira Forest, 3500-3800 ft. (S. A. Neave, July).

The above localities represent a very extensive area of distribution, but the insect is a very well-marked and unmistakable one. It was, without reason, identified by Mr. Gorham as *Zythonia fulva* of Westwood, and is nearly allied to *Petaloscelis* ("*Zythonia*") *anthracinus*, Gorh. Its

size and shape are similar, but it is a little broader, more convex, and less shining, the upper surface being closely punctured, the head and pronotum deeply and strongly. The abdomen is punctured and pubescent beneath.

Petaloscelis monommoides, sp. n.

Niger, nitidus, abdomine pedibusque rufis, antennis piceis, basi et apice rufescentibus; sat longe ovalis, parum convexus, capite fortiter punctato, oculis grosse granulatis, haud magnis; pronoto subtiliter punctato, lateribus paulo fortius, marginibus lateralibus fere rectis, angulis omnibus acutis; scutello fere semicirculari; elytris subtiliter punctato-striatis; pedibus sat validis, tibiis apicem versus paulo dilatantibus; antennis validis, articulis tribus ultimis fortiter transversis.

Long. 5 mm.; lat. max. 2.75 mm.

CAMEROON (G. Schwab).

The single specimen has been presented to the British Museum by Professor R. Thaxter. It resembles *P. anthracinus*, but is smaller, with longer and stouter legs and antennæ, which are also paler in colour. It is very smooth and shining above, with the elytra very lightly punctate-striate; but the head and the sides of the pronotum are much more strongly punctured than in *P. anthracina*, and the eyes are larger and more coarsely faceted. The third joint of the antenna is as long as the two succeeding ones together, the fourth to the seventh are round and bead-like, and the last three more than twice as broad as they are long. The prosternum is carinate anteriorly and dilates from the middle to the posterior edge, the lateral striæ almost meeting in the middle. The mesosternum bears an incised semicircular line.

Amblyopus pulchellus, sp. n.

Læte rufus, elytrorum macula rotundata basali, alia laterali ante medium tertiaeque communi post medium, femoribus tibiis clavaque antennali nigris; elongatus, oculis magnis, grosse reticulatis, pronoto subtiliter sat crebre punctato, lateribus convergentibus, vix arcuatis, angulis posticis rotundatis; elytris punctato-striatis, intervallis subtiliter sat crebre punctulatis; pedibus haud brevibus, tibiis ad extremitates modice dilatatis; antennarum clava angusta, laxè articulata.

Long. 7-8.5 mm.; lat. max. 3.5-4 mm.

CAMEROON (G. Schwab).

Two specimens in the British Museum have been sent by Professor R. Thaxter.

The striking pattern upon the elytra, consisting of five large round black spots placed in a circle upon their basal part, together with the black femora and tibiae and pale tarsi, render this species very easy of recognition. The second, and smaller, specimen is without the spots; but this is apparently owing to immaturity, the red ground-colour being paler. The eyes are very large and prominent, the diameter of each scarcely less than that of the space between them. The club of the antenna is long, narrow, and loosely articulated, the last joint small and globular and the two preceding ones triangular.

Amblyopus lateralis, sp. n.

Niger, elytris, abdomine, tarsis, antennarumque apicibus rufo-fulvis, elytris extus nigro-cinctis, margine antica pone scutellum triangulariter dilatata; elongatus, angustus, oculis magnis, grosse granulatis; pronoto undique subtiliter punctato, lateribus fere rectis, angulis omnibus paulo obtusis, basi medio leviter lobato; scutello transverse pentagonali; elytris subtiliter punctato-striatis, intervallis subtilissime punctulatis; pedibus sat longis, tibiis ad extremitates modice dilatatis; antennarum articulis 3-8 plus minusve elongatis, 9-11 transversis, laxè articulatis.

Long. 7-8.5 mm.; lat. max. 3.5-4 mm.

UGANDA: Entebbe (C. C. Gowdey, May).

The coloration of this species also is quite distinctive and peculiar, the elytra, abdomen, and tarsi being orange-yellow, the elytra completely encircled with black, which embraces the scutellum and extends behind it a short distance down the suture. It is of similar size to *A. pulchellus*, but less convex and rather more finely punctured, with the elytra more elongate, more straight-sided and tapering. The legs are a little longer and the antennæ rather more slender. The prosternum is triangular, broad and slightly emarginate behind, and the mesosternum is almost square.

Amblyopus tristis, sp. n.

Nigro-piceus, clypeo, scutello, corporeque subtus rufo-piceis, pedibus et antennis læte rufis; modice elongatus, parum nitidus, capite leviter punctato, oculis magnis, grosse granulatis; pronoto minute sat crebre punctato, lateribus leviter arcuatis; scutello lato, punctulato; elytris fortiter punctato-

striatis, intervallis subtiliter crebre punctulatis; tibiis apice latissimis, acute angulatis; antennis crassis, clava lata, haud truncata.

Long. 5.5 mm.; lat. max. 2.75 mm.

NYASALAND: Mlanje (*S. A. Neave*, Dec., Jan.).

This species and *Tritoma nigrina*, Gorrh., were found together in the above locality, but the latter was far more numerous. *A. tristis* bears considerable resemblance to that species, but is rather larger and more elongate, with larger and more coarsely-facetted eyes. The antennæ are stout, the third joint only slightly elongate, the club compact and broadly oval in shape, not abruptly truncate at the end. The prosternum and abdomen are very densely punctured, and the entire lower surface is finely pubescent.

This is rather less elongate in form and a little smaller than the other African species which I refer to *Amblyopus*.

Tritoma soror, sp. n.

Omnino ferrugineo-rufa, pedibus paulo pallidioribus, antennarumque clava nigra; late ovalis, convexa, nitida, capite et pronoto subtiliter punctatis, oculis minute granulatis, pronoti lateribus leviter arcuatis, elytris minute striato-punctatis, intervallis subtilissime punctulatis; pedibus robustis, tibiis 4 posterioribus ad extremitates late dilatatis, antennarum clava anguste ovata:

♂, pedibus validioribus, femoribus incrassatis, tibiisque longioribus atque magis dilatatis.

Long. 4 mm.; lat. max. 3 mm.

NYASALAND: Mlanje (*S. A. Neave*, Jan.).

This is closely related to *T. senegalensis*, Crotch, and of the same form and colour, but more finely punctured, especially upon the pronotum. The last five joints of the antenna (not three only) are black. The size and general shape are almost those of the familiar European species, *T. bipustulata*, but the colour is brick-red, the legs are stouter, and the club of the antenna is long and narrow.

Tritoma spilota, sp. n.

Læte sanguineo-rufa, pronoti punctis 2 basalibus, elytrorum punctis 4 ante medium transverse positis, antennarumque clava nigris; ovalis, convexa, nitida, supra ubique sat fortiter et crebre punctata, oculis parvis, minute granulatis, pronoti lateribus æqualiter subtiliter arcuatis, angulis anticis acutis; elytris striato-punctatis, intervallis modice crebre, parum minute

punctatis; pedibus robustis, tibiis ad extremitates modice dilatatis; antennarum articulis tribus ultimis transversis, sat magnis.

Long. 5 mm.; lat. max. 3 mm.

UGANDA: Daro Forest, Toro, 4000-4500 ft. (*S. A. Neave*, Oct.).

I know only a single specimen of this beautiful little species, which is quite unlike any other. It is bright scarlet, with a black spot on each side of the pronotum at the base and two upon each elytron, one behind the shoulder and another opposite to it near the suture, neither quite touching the margin. It is rather strongly and closely punctured, the tibiae are moderately dilated, and the club of the antenna is large and black.

Tritoma partita, sp. n.

Sanguineo-rufa, elytrorum dimidio postico, femoribus, tibiis, antennarumque clava nigris; ovalis, convexa, nitida; capite sat crebre punctato, oculis sat parvis et minute granulatis; pronoto subtiliter punctato, lateribus paulo fortius, marginibus lateralibus leviter arcuatis, angulis anticis acutis, basi fortiter lobato; scutello lato, fere laevi; elytris antice sat fortiter seriato-punctatis, lineis posticis fere oblitteratis, intervallis minute inaequaliter punctulatis; tibiis late triangulariter dilatatis; antennis brevibus, articulis tribus ultimis minutis, transversis, parum compactis.

Long. 5-5.5 mm.; lat. max. 3-3.5 mm.

NYASALAND: Mlanje (*S. A. Neave*, Jan.).

Two specimens.

T. partita approaches the genus *Palaeolybas* in structure as well as in appearance, but the prosternum is not bilobed behind. Its coloration is remarkable. It is deep red anteriorly, with rather less than half the body posteriorly (*i. e.*, the hinder two-thirds of the elytra), together with the femora and tibiae, jet-black. It is regularly oval, highly convex, and very smooth and shining, and the elytra exhibit at the base well-marked lines of punctures which become gradually fainter and are indistinct behind.

Tritoma alternans, sp. n.

Rufa, elytrorum basi et apice antennarumque clava nigris; elongato-ovalis, modice convexa, nitida, capite et pronoto sat fortiter et crebre punctatis, hujus lateribus subtiliter arcuatis, angulis omnibus obtusis; scutello leviter punctato; elytris

leviter striato-punctatis, intervallis parum minute sat crebre punctatis; pedibus modice validis, tibiis apice parum dilatatis; antennarum articulo tertio ad tria sequentia longitudine æquali, tribus ultimis transversis.

Long. 5 mm.; lat. max. 3 mm.

UGANDA: Unyoro, Budongo Forest, 3400 ft. (S. A. Neave, Dec.).

A single specimen.

The coloration of this species is also highly distinctive. It is deep red, with about one-sixth of the elytra from the base (not including the scutellum, which is red) and about one-fourth from the posterior end black, and the last four or five joints of the antennæ of the same colour. It is smooth and shining, rather elongate and not very convex, with the upper surface closely and distinctly punctured, but the elytral striæ feeble.

Tritoma tibialis, sp. n.

Nigra, nitida, antennis tibiis tarsisque flavis, elytrorumque macula magna basali ab humero ad scutellum pertinenti rufa; haud longe ovalis, parum convexa, capite crebre et subtiliter punctato, oculis parvis, minute granulatis; pronoto lato, similiter sed minus crebre punctato, lateribus anguste marginatis, antice valde arcuatis, postice rectis, angulis omnibus obtusis; scutello lævi, angulato; elytris fortiter punctato-striatis, interstitiis subtilissime punctulatis; tibiarum extremitatibus fortiter dilatatis, antennarum clava late ovali, parum compacta.

Long. 3-4 mm.; lat. max. 2-2.5 mm.

NYASALAND: Mlanje (S. A. Neave, Jan.).

This appears to resemble *T. liberiana*, Gorh. It is more elongate and less convex than *T. bipustulata*, the red elytral spot is large, extending the whole width of the basal margin, evenly rounded and generally more than one-third as long as the elytra, and finally the antennæ, tibiæ, and tarsi are wholly pale. The tibiæ are very strongly dilated at the end.

Tritoma flaviventris, sp. n.

Nigra, nitida, corpore subtus, antennis, pedibus elytrorumque macula magna basali communi scutellum amplexanti, ad humeros haud attingenti, fulvis; haud longe ovalis, parum convexa, capite et pronoto sat fortiter et crebre punctatis, oculis prominentibus, modice granulatis; pronoto lato, lateribus marginatis, antice valde arcuatis, postice fere rectis, elytris fortiter punctato-striatis, intervallis subtiliter punctulatis; tibiis

ad extremitates paulo dilatatis; antennarum clava laxè articulata.

Long. 4·5 mm.; lat. max. 2·5 mm.

UGANDA: Entebbe (C. C. Gowdey, May).

There are two specimens in the British Museum.

T. flaviventris is closely similar to *T. tibialis*, but the lower surface, as well as the legs and antennæ, is pale, and the pale basal patches of the elytra unite at the suture and do not extend to the shoulders. It is rather larger, relatively broader, with the pronotum more strongly punctured, the tibiæ much less dilated at the ends, the antennal club more loosely jointed and less short and broad, and the eyes not very small or very finely faceted.

Palaelybas nigrocinctus, sp. n.

Sanguineo-rufus, elytrorum dimidio anteriori nigro, hujus partis margine posteriori dentata; breviter ovalis, convexus, nitidus, capite et pronoto sat crebre et æqualiter punctatis, elytris subtiliter punctato-striatis, interstitiis subtilissime punctulatis; antennis exiguis, articulis tribus ultimis minutis:

♂, elytrorum dimidii postici parte media subopaca.

Long. 8 mm.; lat. max. 5·5 mm.

OLD CALABAR (A. Murray).

The two specimens from which this is described formerly belonged to the late Alexander Fry, who obtained them from Murray's collection, from which also *P. andreæ* and *humeralis* were described by Crotch. Whether all were actually collected in Old Calabar is perhaps a little doubtful, for *P. coccinelloides*, Crotch, and *P. dorsalis*, Gorb., were also attributed by Murray to the same locality, and the former at least certainly does not occur there, belonging to South-Eastern Africa (Nyasaland, Portuguese East Africa, Transvaal, Natal, etc.). Specimens in the British Museum which I have identified as *P. andreæ* are from the French Congo. The male has in that species a conspicuous round area of an opaque texture upon the posterior half of the elytra. The two specimens of *P. nigrocinctus* are both males, and the hinder part of the elytra is less shining than the remaining surface, but the area is not definitely circumscribed nor conspicuous. The red colour is much brighter than in the other species, and the black band is much wider, occupying more than a third of their length.

Palæolybas apicalis, sp. n.

Sanguineo-rufus, elytrorum humeris, marginibus externis parteque tertia apicali, antennarumque clava nigris; late ovalis, convexus, nitidus, capite et pronoto subtilissime haud crebre punctatis, hujus lateribus bene arcuatis, angulis anticis haud acutis, elytris vix perspicue striato-punctatis; antennarum articulis tribus ultimis minutis:

♂, elytrorum dimidio postico medio opaco, velut sericeo.
Long. 8-9 mm.; lat. max. 6 mm.

UGANDA: Entebbe (C. C. Gowdey, Aug., Nov.).

Three practically identical specimens are all males, and the opaque round area common to the two elytra upon their posterior half is very distinct. The species closely resembles *P. cychramoides*, Gorh., of which I have seen only a single female; but, besides a considerable extension of the black colour at the apex of the elytra, it is larger and relatively broader, with the puncturation finer, the sides of the prothorax more rounded, and the front angles blunter. The antennæ are very delicate, with joints 4 to 8 rather elongate.

Palæolybas bizonatus, sp. n.

Sanguineo-rufus, pronoto maculis tribus rotundis (una mediana majori, unaque utrinque versus angulos anticos sita), elytris zonis duabus (prima basali, secunda paulo post medium) undulatis lateraliter anguste connexis, pedibus antennarumque clava nigris; ovalis, convexus, capite pronotoque minute sat crebre punctatis, elytris minutissime punctato-striatis; antennarum articulis tribus ultimis haud minutis.

Long. 5.5-8 mm.; lat. max. 4.5-5 mm.

UGANDA: Tero Forest (C. C. Gowdey, July), Southern Toro, Mbarara, 3800-4200 ft. (S. A. Neave, Oct.).

This is rather less broadly oval than the two preceding species and rather less shining, the puncturation being rather less fine than in *P. apicalis*, but more so than in *P. nigrocinctus*. The antennæ are a little shorter and stouter.

The sexes differ only in the more dilated tarsi of the male.

Palæolybas latus, sp. n.

Sanguineo-rufus, pronoto utrinque minute nigro-punctato, elytris extus bimaculatis (macula humerali aliaque paulo post medium intus leviter hamata, maculis duabus ad marginem connexis), pedibus (tarsis exceptis) antennarumque clava nigra; ovalis,

convexus, nitidus, capite et pronoto minute sat crebre punctatis ;
antennis brevibus, articulis tribus ultimis transversis.
Long. 8 mm. ; lat. max. 5 mm.-

UGANDA: Buamba Forest, Semliki Valley, 2300-2800 ft.
(S. A. Neave, Nov.).

The single specimen is a male and is without an opaque area upon the elytra.

It is a closely related species to *P. bizonatus*, the shape and sculpture being the same ; but the large median thoracic spot is absent and the two black bands of the elytra are reduced to two large spots at each outer margin, united externally, the first placed at the shoulder and the second behind the middle and a little produced internally.

Palæolybas rufocinctus, sp. n.

Sanguineo-rufus, elytris antennarumque clava nigris, illorum fascia mediana communi ad margines externas haud attingenti apicibusque extremis sanguineo-rufis ; late ovatus, convexus, nitidus, capite et pronoto subtiliter sat crebre punctatis, elytris subtiliter punctato-striatis, interstitiis subtilissime punctulatis, antennarum articulis tribus ultimis transversis :

♂, elytrorum dimidii postici parte mediana opaca.

Long. 8.5 mm. ; lat. max. 6 mm.

N. RHODESIA: Katanga, 150-200 miles W. of Kambove, 3500-4500 ft. (S. A. Neave, Oct.).

A single male specimen.

This is rather larger and relatively broader than *P. bizonatus*, but not quite so large or so broad as *P. apicalis*, and besides the different coloration is distinguished by a puncturation of the upper surface which is stronger than in *P. apicalis*, while that of the pronotum is more scattered than in *P. bizonatus*. The antennæ also are a little shorter and more compact.

Palæolybas ferrugineus, sp. n.

Onnino ferrugineus, antennarum clava solum nigra ; ovalis, convexus, capite crebre punctato, pronoto nitido, distincte sed minus crebre punctato, lateribus vix arcuatis, elytris parum nitidis, subtiliter punctato-striatis, interstitiis haud sparse aut subtilissime punctulatis ; antennis brevibus, clava elongata, paulo dilatata, haud compacta.

Long. 6.5 mm. ; lat. max. 4.5 mm.

UGANDA: Tero Forest, S.E. Buddu, 3800 ft. (S. A. Neave, Sept. ; C. C. Gowdey, July).

Only a single male was found by each collector. Unlike the other species, this is uniformly rusty-brown instead of blood-red, and the club of the antenna alone is black. The pronotum is very smooth and shining, but the head and elytra are scarcely shining (in the male at least), their puncturation being less fine and scanty than usual. The antennæ are very delicate and the club is rather elongate, with moderately broad but loosely articulated joints.

Euxestus angustus, sp. n.

Rufopiceus, antennis pedibusque pallidioribus; anguste ovatus, convexus, nitidus, corpore supra ubique æqualiter sat fortiter et crebre punctato; antennis indistincte 11-articulatis, clava solida, triangulari, apice late truncata.

Long. 2.5 mm.; lat. max. 1 mm.

NATAL: Durban (*F. Muir*), Malvern (*G. A. K. Marshall*, Sept.); RHODESIA: Salisbury (*G. A. K. Marshall*, Dec.).

Although closely related to *E. parki*, Woll., this is very distinctly different. It is of practically the same size and colour, but considerably more elongate and more strongly, closely and evenly punctured on the head, pronotum and elytra. The antennæ have the same peculiar conformation, but are rather less highly modified, the eleven joints composing each being distinguishable, although the articulations are not all perfect. The basal joint is large, but rather less so than in the typical species; the second smaller, but well marked; the third elongate; the fourth to the sixth very small and imperfectly articulated; the seventh to the ninth progressively widening, the ninth twice as wide as it is long and closely applied to the base of the club, which forms a flattened sphere, its broad terminal part plainly formed by the eleventh joint, which appears as though almost sunk into the tenth.

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